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ABSTRACT

The current level of interaction between campus institutional research components and the central office within western public higher education systems was investigated. Findings are based on a survey of institutional research officers representing 12 systems and 21 institutions. General trends are addressed through comparison of the institutional research office's general responsibilities to activities conducted for the central office. A comparison is made of the level of this activity to total office time devoted to completing all internal and external information requests. The results also describe and quantify the participation of the institutional research office in the development of systemwide reports and the capacity of the central office to undertake its research. It was found that most of the 21 western state system university institutional offices spend about one-sixth of their information request time completing work for the central office. However, for any particular office the level of this activity varied greatly. Information requests, on the average, consumed two-thirds of the institutional research office's time, and 44% of this time was given to internal requests, and 22% for external parties. 11 references. (Author/SW)

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# RECENT TRENDS IN CAMPUS INSTITUTIONAL RESEARCH FOR THE SYSTEM CENTRAL OFFICE: A Study of Western State Universities

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This study attempts to describe the current level of interaction between campus institutional research components and the central office within western public higher education systems. Findings are based on a survey of institutional research officers representing twelve systems and twenty-one institutions. General trends are addressed through comparison of the institutional research offices's general responsibilities to activities conducted for the central office. Analysis further compares the level of this activity to total office time devoted to completing all internal and external information requests. The results also describe and quantify the participation of the institutional research office in the development of systemwide reports and the capacity of the central office to undertake its own research.

## Literature Review

During the last thirty years, public higher education has experienced the rapid development of state university systems. Today, approximately one-half of the nation's public campuses are within a system and account for over one-half of the total student enrollment. While varying in composition and authority from state to state, system governing boards and associate staff have significantly affected the structure of public higher education. During this period, the general influence of the system central office has been continually examined in literature (Glenny, 1959; et al.)

Several works have also noted the increasing informational requirements of the system central office, and the system's dependence on institutional research offices to provide varied data collection and analysis (Corson, 1974; Westphal, 1984; and Schmidtlein, 1985). The nature of interaction between the institutional research office and the system central office has a direct bearing on current patterns of information flow and decision support. For institutional researchers at campuses within a system, meeting the diverse statistical needs of the central office is a prominent expanding role of the profession.

As well, this topic lends potential contribution to discussion concerning the status of the autonomy of public higher education. As the central office demands for information may, overtime, enlarge the system's

role in internal decision making (Corson, 1974).

## Survey Design

To add to existing research on the current level of institutional research activities for the central system office, a questionnaire was constructed in the fall of 1986 and sent to institutional researchers at system state universities. The initial survey was developed to begin quantitative data collection on this topic and was limited to the states of Arizona, California, Colorado, Idaho, Kansas, New Mexico, Nevada, Oregon, Texas, and Utah.

The main body of the survey is designed to give appropriate indications on a variety of characteristics between the make-up of the responding institutional research operation, the system's own research capacity, and recent level of interaction between the institutional research and system central offices. In addition to completing institution and system size variables, each campus institutional researcher was requested to complete fourteen questions for their respective operation. Activities conducted by another office whose primary responsibility is outside institutional research were asked to be excluded (i.e., Admissions, Registrar, etc.).

Another set of questions deals with more subjective perceptions of whether the level of activity of the central office has increased or

decreased in the recent past. The respondents are also asked if they expect any change in the level of interaction between the institutional research office and system central office.

To determine individual office areas of responsibility, respondents were asked to assign primary and secondary involvement to nineteen management information areas often assisted or overseen by these types of offices. Respondents were given further instructions to indicate whether reports in these nineteen areas were prepared specifically for the central office, whether these reports were expected on a regular or periodic basis and whether the reports supplied summary or detailed information. Other questions inquire into whether the reports were used to standardize any operation between system institutions, and whether the institutional research office was involved in the design of the system reports.

A series of questions were developed to measure campus institutional research resources assigned to meet the system central office's information requests in comparison to other constituencies. The survey obtains estimates of institutional research office time devoted to completing internal and external information requests as a percentage of total available time. From the total time devoted to information requests, the survey asks respondents to assign time allotted for eleven categories of information requestors.

## Respondent Characteristics

Responses collected from 21 institutional researchers at state universities were used in the analysis. Represented institutions were members of 12 higher education systems in 10 western states.

The representative universities ranged between some of the smaller four-year universities to some of the largest research institutions found in the nation. Most were medium-size comprehensive institutions. The smallest surveyed university enrolled 3,189 FTE students in fall 1985, and the largest enrolled 33,229. Mean student FTE for survey group was 14,379. The wide range in size was also evident in 1984/85 educational and general expenditures. The smallest institution reporting expenditures of $16,223,544, and the largest reported $400,665,172. Mean educational and general expenditures for the survey group was $149,157,199.

Respondents completing the survey also varied in background characteristics such as education, years in institutional research capacities, and years of service at their current institution. Ten of the 21 institutional researchers had earned a doctorate, another 9 had obtained a master's degree, and 2 have bachelor's degrees as their highest educational level. Of those with doctorates, 6 were in education or higher education, 2 were in psychology, 1 was in sociology, and another in anthropology. The respondents possessed between 2 and 25 years of experience in the field, with the average time being 12.3 years. Perhaps reflecting some

commonality in changing job roles within the university the respondents were employed an average of 14.1 years at their current institution.

Six of the 21 respondents were female, and only one respondent was an ethnic minority.

## Information Request Time for the Central Office

The survey results indicate that most western state system university institutional offices, as determined by the responses from 21 western representatives, spend about one-sixth of their total information request time completing work for the central office. However, for any particular office the level of this activity may vary greatly.

All information requests consumed between one quarter to all of the surveyed offices total available time. On the average, the offices devoted two-thirds of their time to information requests. Forty-four percent of this time was given to internal requests, and 22% for external parties.

TABLE 1. Time IR Office Devotes to Completing Information Requests (of total available office time)

| Information Requests Type | Range of Total Time | Mean | Mode | N |
|---|---|---|---|---|
| Time for Internal Requests | 10-80 | 44 | 50 | 21 |
| Time for External Requests | 05-50 | 22 | 20 | 21 |
| Total Request Time | 25-100 | 66 | 50 | 21 |

TABLE 2. Total Request Time by Category of Requestor

| Requestor Categories | Range of Total Time | Mean | Mode | N |
|---|---|---|---|---|
| Internal | | | | |
| Department Level | 01-15 | 06 | 05 | 18 |
| College Level | 01-30 | 09 | 10 | 19 |
| Executive Management | 08-50 | 25 | 25 | 19 |
| Other Administration | 01-30 | 07 | 03 | 15 |
| Other Institutional Support | 01-20 | 06 | 05 | 13 |
| Other Internal | 03-15 | 06 | 05 | 04 |
| External | | | | |
| Other System Institutions | 01-05 | 02 | 05 | 12 |
| System Central Office | 01-61 | 20 | 15 | 18 |
| Other State Agencies | 01-20 | 05 | 02 | 15 |
| Institutions Outside System | 01-29 | 04 | 05 | 18 |
| Other External | 02-32 | 10 | 10 | 06 |

N=Number of Responding University IR Offices

The system central office was found to be the second highest user of the institutional research office's information gathering and reporting capacities, following only below the institution's own executive management. Surveyed offices spent between 1% and 61% of their information request time devoted to the system central office, with the most frequent reply being 15%. Executive management requests ranged between 8% and 50% of this time, with the most frequent response being 25% among these institutions. Falling next but far behind these two categories, other external requestors consumed the next largest amount of information request time. The results also indicate that as the time for overseeing central office information requests increase, so does the total portion of office time granted to external requestors.

## System Central Office Research Characteristics

The majority of respondents indicate that their system central offices maintain active data processing and research sections. Sixteen of 21 respondents report that their central office have research components. As well, the central office for two-thirds of the respondents generate reports based on data tapes or other raw information provided by the institutional research office or the university computing center. Over one-half of the respondents note that their central office maintains its own management information system mainframe computer separate from that of

the institution. The central office also prepares HEGIS/IPEDS reports for 30% of the represented institutions.

The minority of responses indicated that reports generated by the university institutional research office were used by the system central office to standardize any operation of the system institutions. Eight of 19 respondents point out that standardization was a purpose for system reports. Individual responses listed such standardization taking place in areas as admission standards, enrollment analysis, workloads, budget allocations, and equalized academic funding.

Also divided, only 11 of 21 respondents noted that they were involved in designing the framework for systemwide reports.

Overall, responses appear to suggest a gradual increasing level of institutional research activity for the central office. A total of 11 respondents, out of 21, indicate that central office information requests have increased in the past year. This figure rises to 12 respondents noting an increase over the past three years. Nine respondents pointed to the same level of activity in the past year; as well as the past three years. One respondent perceived a decrease in the level of activity in the past year, but none indicated a decrease in the past three years.

Survey results tend to show that the level of institutional research activity for the central office may be influenced by the central office's

data processing capabilities. Results indicated that institutions with central offices possessing MIS capabilities, or requesting data tapes or other raw information, on the average spent 25.5% of their total information request time for the central office. Those respondents with central offices not having MIS capabilities devoted only 11.9% of their total request time seeing to these needs. Respondents with central offices who do not request data tapes or other raw information spend 10.8% of their time to these needs. Whether a central office maintains its own institutional research capacity, or involved the campus office in the design of systemwide reports, did not seem to influence the level of activity of the central office.

Table 3. University IR Office Percentage of Time for Central Office (as of Total Info. Request Time) by COIR, COMIS, Raw Info, and Asst Design Responses

| % of Total info request time devoted to C. O. | C.O. Maintains own IR component | | C.O. Maintains own MIS mainframe | | U. IR or U. CC. provide raw info to C.O. | | U. IR assisted in designing C. O. reports | |
|---|---|---|---|---|---|---|---|---|
| | No | Yes | No | Yes | No | Yes | No | Yes |
| .01 | | 1 | 1 | | 1 | | 1 | |
| .05 | 2 | | 2 | | 2 | | 1 | 1 |
| .10 | 1 | 2 | 2 | | | 3 | 2 | 1 |
| .15 | | 4 | 1 | 3 | 2 | 2 | 3 | 1 |
| .20 | | 1 | | 1 | | 1 | 1 | |
| .24 | 1 | | | 1 | 1 | | | 1 |
| .25 | | 3 | | 1 | | 3 | | 3 |
| .40 | | 1 | | 1 | | 1 | | 1 |
| .50 | | 1 | | 1 | | 1 | | 1 |
| .61 | 1 | | 1 | | | 1 | | 1 |
| Total N | 5 | 13 | 9 | 8 | 6 | 12 | 8 | 10 |
| % | 27.8 | 72.2 | 52.9 | 47.1 | 33.3 | 66.7 | 44.4 | 55.6 |

N=Number of Responding University IR Offices

The study indicates that the central offices may be becoming more able to conduct research, but are dependent on individual campuses to provide data. Data tapes or other types of raw information are provided by 12 of 16 surveyed respondents who have central offices with institutional research capacities; 8 of this group also noted that the central office maintained a MIS mainframe. Of 11 respondents seeing an increase in activity of the central office in the past year, 9 of these responses also had central offices with institutional research capabilities. Of the 12 indicating an increase in activity over three years, 10 responses also came from those with central offices having institutional research capabilities.

Analysis of the university institutional research offices area of responsibilities was conducted on responses assigning primary to secondary involvement to a listing of 19 management information areas often assisted or overseen by such operations. Ratings were given using a 5 (high involvement) to 1 (low involvement) scale. These responsibility areas were arranged according to mean score. Results pointed to the represented highest area of involvement being student demographics (mean=4.41), closely followed by enrollment analysis (mean=4.38). Areas of moderately high involvement included cost analysis of academic programs, planning, peer institutions, and space utilization.

Table 4. IR Areas of Responsibility 5 (High Involvement) to 1 (Low Involvement)

| Involvement Level | Responsibility Rank | Research Activity | Mean Score | N | Standard Deviation | Reporting for System Rank | N |
|---|---|---|---|---|---|---|---|
| High | 1 | Student Demographics | 4.41 | 17 | 1.1 | 2 | 13 |
| | 2 | Enrollment Analysis | 4.38 | 21 | 1.0 | 1 | 19 |
| | 3 | Cost Analysis (Academic) | 3.88 | 16 | 1.3 | 4 | 11 |
| Moderately | 4 | Planning | 3.63 | 19 | 1.1 | 3 | 12 |
| High | 5 | Peer Institutions | 3.60 | 15 | 1.5 | 7 | 10 |
| | 6 | Space Use/Facilities | 3.56 | 18 | 1.3 | 6 | 11 |
| | 7 | Student Retention | 3.23 | 17 | 1.5 | 10 | 8 |
| | 8 | Budget Development | 3.20 | 15 | 1.2 | 13 | 7 |
| Moderate | 9 | Formula Funding | 3.06 | 16 | 1.3 | 5 | 11 |
| | 10 | Salary Equity | 2.93 | 14 | 1.6 | 9 | 8 |
| | 11 | Financial Analysis | 2.67 | 18 | 1.1 | 14 | 7 |
| | 12 | Program Productivity | 2.64 | 14 | 1.4 | 12 | 7 |
| Moderately | 13 | Cost Analysis (Non-Aca.) | 2.64 | 11 | 1.4 | 15 | 5 |
| Low | 14 | Admissions & Marketing | 2.54 | 13 | 1.4 | 11 | 7 |
| | 15 | Organized Research | 2.54 | 11 | 1.9 | 16 | 3 |
| | 16 | Academic Reviews | 2.33 | 15 | 1.4 | 8 | 9 |
| | 17 | Personnel/Payroll | 1.93 | 14 | 1.0 | 17 | 3 |
| Low | 18 | Curriculum Development | 1.64 | 11 | 0.9 | 19 | 1 |
| | 19 | Student Testing | 1.44 | 9 | 1.0 | 18 | 2 |

N=Number of Responding University IR Offices

## Reporting Responsibilities for the Central Office

Survey results indicated that in most cases the respondent's primary areas of central system reporting patterned that of their overall areas of responsibility. All but one area of high or moderately high institutional research office involvement were also the highest ranked areas of reporting responsibility for the central office.

Similarly, interaction between the campus office and the central office is also suggested in the type of reporting done for the system. Most often the areas of high involvement were also the areas where the central office requested regular and detailed reports. In areas of low involvement the institutional research offices generally provided periodic and summary reports, if reports in these areas were provided at all.

## Conclusions

Results of this limited study indicate that meeting the information needs of the central office is a prominent and expanding role for the campus institutional research office for most western state university systems. Closely following the institution's own executive management, the central office generally received the most of the surveyed institutional research office's attention related to information requests. However, central office requests varied from taking a minimal time to requiring the bulk of the office's available resources.

There is some existing thought that, over time, as central offices expand their own data processing capabilities, less resources may be required from campus institutional research offices. The premise of this argument being that the institutional research office or the computer center may eventually act as a conduit for raw data from which the central office may conduct its own analysis of system institutions. This study does not support this conclusion. These results indicate that campus offices spend more time for a central office that maintains an MIS mainframe, or requests information in raw data form, than central offices which do not possess these capabilities.

The study further indicates that the campus office's areas of reporting for the central office follow the general areas of responsibility, but focus on mutual areas of high interest. This would seem to support a fostering of relations between the institutional research and central office along broad information interests, but with interaction dominated by enrollment analysis and student demographic issues. However, only a slight majority of responding researchers indicated that they were involved in designing the framework of systemwide reports.

Surveyed campus offices are divided on whether in their estimation the reports they provide the central office are used to standardize operations between institutions. However, it seems fairly clear that systemwide efforts are influencing the development of common data elements and consistency in institutional reporting to the central office.

Institutional research offices with increasing levels of activity for the central office generally had central offices that were apparently more information oriented. Most often the respondents experiencing increases in central office requests during the past year, and the past three years, had central offices which maintained their own research components, MIS mainframes, and more commonly received information in raw data form. A general trend towards increasing level of activity for the central office was also indicated among other surveyed institutions.

There is no clear explanation for the impression that campus institutional research offices with central offices having MIS capabilities, or requesting raw data, spend more time, instead of less, working for the central office. Expanded research over a longer period of analysis is needed to answer this question. One possible argument may be that most central offices have only recently gained active data processing abilities, and must depend on campus support while data sophistication becomes refined. If central offices have operated data processing functions for sufficient time to make systems workable and are still requiring additional campus time, perhaps the trend toward moving management information systems away from the campus has not been efficient or productive. Another possible explanation is the creation of an enlarging "information snowball" whereby the amount and frequency of data transfer requires increasing attention on each campus to collect, format, and forward information according to central office specifications.

This initial study reveals some basic commonalities and differences among campus offices conducting research for the system central office. Results suggest that much more detailed analysis will be required to fully comprehend emerging trends which will most likely increase in prominence as institutional research and analysis enters the 1990's. While not posing a visible problem to this study, future research on this topic would be assisted by arriving at common definitions of terms and tasks to avoid any misinterpretation by the respondents. The results of this study showed no apparent difference in the level of activity for the central office and institutional size measures of student FTE, and educational and general expenditures. Not addressed, but perhaps more influential on time devoted to the central office are the differences between institutional research offices in size, resources, and personnel.

Further research, including closer examination of the characteristics of institutional research offices and those of the central offices, is needed to better understand the relationship between these operations. Additional research on this topic should also compare the assessment and perceptions of researchers working in the central office, as well as those at the campuses, to present a balanced description of cooperative interaction and information exchange.

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